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10/693,606	10/27/2003	Wolfgang Drahm		6460

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EXAMINER	
BELLAMY, TAMIKO D	
ART UNIT	PAPER NUMBER
2856	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/693,606	Applicant(s) DRAHM ET AL.
	Examiner Tamiko D. Bellamy	Art Unit 2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11,13,16,18,20-26,30,34, and 37-45* is/are rejected.

7)☒ Claim(s) *12,14,15,17,19,27-29,31-33,35 and 36* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 11, 13, 16, 18, 20-23, 25, 26, 30, 34, 37-43, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cary et al. (4,827,771) in view of Wenger et al. (2001/0039829).

Re claim 11, as depicted in fig. 11, Cary et al. discloses a sensor (e.g., combination of pedestal (114), probe base (142), and probe tip portion (152)). As depicted in fig. 11, Cary et al. discloses an electronics case (e.g., housing 102) for meter electronics, which is mechanically, particularly rigidly coupled to the sensor (e.g., combination of pedestal (114), probe base (142), and probe tip portion (152)). As depicted in fig. 11, Cary et al. discloses that in order to reduce amplitudes of possible vibrations of the electronics case, a vibration absorber (e.g., shock mounting 134) which is vibrated at least intermittently in order to dissipate vibrational energy taken into the electronics case (e.g., housing 102) is affixed to a wall of the electronic case (e.g., housing 102) (Col. 7, lines 58-65). **While Cary et al does not specifically disclose that the sensor can be <u>mounted in a wall</u> of a vessel for holding /conveying a process medium, Cary et al. discloses an acceleration type vibration meter where a velocity vibration parameter is read out (Col. 7, lines 20-25), the device of Cary et al. will**

operate equally as well. Wenger et al. discloses a vibration meter wherein sensors (17, 18) are velocity-measuring electrodynamic sensors, or displacement, or acceleration measuring electrodynamic sensors (Pg. 5, par. 123; Pg. 6 par. 124). As depicted in fig. 1, Wenger et al. discloses sensors (17, 18) mounted in the wall of a vessel (e.g., flow tube 13) for conveying a process medium (e.g., fluid). Therefore, to modify Cary et al. by employing a sensor mounted in a wall of a vessel would have been obvious to one of ordinary skill in the art at the time of the invention since Wenger et al. teaches a vibration meter having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Cary et al. and Wenger et al. since Cary states that his invention is applicable to a vibration meter and Wenger et al. is directed to using as vibration meter mounted within a vessel for conveying a process medium.

Re claim 13, Cary et al. discloses that the vibration absorber (e.g., shock mounting 134) is formed, for example, of urethane rubber. The urethane rubber inherently has a quality factor, which is lower than a quality factor, of the electronics case (e.g., housing 102) (Col. 7, lines 65).

Re claim 16, Cary et al. discloses a vibration absorber (e.g., shock mounting 134 such as urethane rubber), which inherently has a resonant frequency, which is less than the resonant frequency of the electronic case (e.g. housing 102).

Re claim 18, as depicted in fig. 11, Cary et al. discloses that the vibration absorber (e.g., shock mount 134) is disposed within the electronics case (e.g., housing 102).

Re claim 20, a depicted in fig. 11, Cary et al. discloses a vibration absorber (e.g., shock mounting 134) affixed to a wall of the electronics case (e.g., housing 102). While

Cary et al. does not specifically disclose the vibration absorber affixed with adhesive, the method of affixing is a design choice clearly in the preview of one having ordinary skill in the art. Therefore to modify Cary et al. by employing on a vibration absorber affixed to the electronics case via adhesive would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches affixing an vibration absorber to the inner wall of an electronic case. **While Cary et al does not specifically disclose that the sensor can be mounted in a wall of a vessel for holding /conveying a process medium, Cary et al. discloses an acceleration type vibration meter where a velocity vibration parameter is read out (Col. 7, lines 20-25), the device of Cary et al. will operate equally as well.** Wenger et al. discloses a vibration meter wherein sensors (17, 18) are velocity-measuring electrodynamic sensors, or displacement, or acceleration measuring electrodynamic sensors (Pg. 5, par. 123; Pg. 6 par. 124). As depicted in fig. 1, Wenger et al. discloses a sensor (17) mounted in the wall of a vessel (e.g., flow tube 13) for conveying a process medium (e.g., fluid). Therefore, to modify Cary et al. by employing a sensor mounted in a wall of a vessel would have been obvious to one of ordinary skill in the art at the time of the invention since Wenger et al. teaches a vibration meter having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Cary et al. and Wenger et al. since Cary states that his invention is applicable to a vibration meter and Wenger et al. is directed to using as vibration meter mounted within a vessel for conveying a process medium.

Re claim 21, Cary et al. discloses a vibration meter. **While Cary et al does not specifically disclose that the sensor is a viscometer, Cary et al. discloses**

an acceleration type vibration meter where a velocity vibration parameter is read out (Col. 7, lines 20-25), the device of Cary et al. will operate equally as well. Wenger et al. discloses a vibration meter wherein sensors (17, 18) are velocity-measuring electrodynamic sensors, or displacement, or acceleration measuring electrodynamic sensors (Pg. 5, par. 123; Pg. 6 par. 124). As depicted in fig. 1, Wenger et al. discloses a sensor (17) mounted in the wall of a vessel (e.g., flow tube 13) for conveying a process medium (e.g., fluid). The device of Wenger et al. measures viscosity of a fluid. Therefore, to modify Cary et al. by employing a sensor that is a viscometer would have been obvious to one of ordinary skill in the art at the time of the invention since Wenger et al. teaches a vibration meter having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Cary et al. and Wenger et al. since Cary states that his invention is applicable to a vibration meter and Wenger et al. is directed to using a vibration meter mounted within a vessel for conveying a process medium.

Re claim 22, as depicted in fig. 11, Cary et al. discloses an electronic case (e.g., housing 102) is screwed (122) onto a neck portion of the sensor (e.g., combination of pedestal (114), probe base (142), and probe tip portion (152)).

Re claim 23, Cary et al. discloses a vibration meter. **While Cary et al does not specifically disclose that the sensor <u>mounted in a wall</u> of pipe, Cary et al. discloses an acceleration type vibration meter where a velocity vibration parameter is read out (Col. 7, lines 20-25), the device of Cary et al. will operate equally as well.** Wenger et al. discloses a vibration meter wherein sensors (17, 18) are velocity-measuring electrodynamic sensors, or displacement, or acceleration measuring electrodynamic

sensors (Pg. 5, par. 123; Pg. 6 par. 124). As depicted in fig. 1, Wenger et al. discloses a sensor (17) mounted in the wall of a pipe (e.g., flow tube 13) for conveying a process medium (e.g., fluid). Therefore, to modify Cary et al. by employing a sensor mounted in a wall of a vessel would have been obvious to one of ordinary skill in the art at the time of the invention since Wenger et al. teaches a vibration meter having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Cary et al. and Wenger et al. since Cary states that his invention is applicable to a vibration meter and Wenger et al. is directed to using as vibration meter mounted within a vessel for conveying a process medium.

Re claim 25, as depicted in fig. 11, Cary et al. discloses a sensor (e.g., combination of pedestal (114), probe base (142), and probe tip portion (152)). As depicted in fig. 11, Cary et al. discloses an electronics case (e.g., housing 102) for meter electronics, which is mechanically coupled to the sensor (e.g., combination of pedestal (114), probe base (142), and probe tip portion (152)). As depicted in fig. 11, Cary et al. discloses that in order to reduce amplitudes of possible vibrations of the electronics case, a vibration absorber (e.g., shock mounting 134) which is vibrated at least intermittently in order to dissipate vibrational energy taken into the electronics case (e.g., housing 102) is affixed to a wall of the electronic case (e.g., housing 102) (Col. 7, lines 58-65). **While Cary et al does not specifically disclose that the sensor senses a process variable, Cary et al. discloses an acceleration type vibration meter where a velocity vibration parameter is read out (Col. 7, lines 20-25).** Wenger et al. discloses a vibration meter wherein sensors (17, 18) are velocity-measuring electrodynamic sensors, or displacement,

or acceleration measuring electrodynamic sensors (Pg. 5, par. 123; Pg. 6 par. 124). As depicted in fig. 1, Wenger et al. discloses a sensor (17) mounted in the wall of a vessel (e.g., flow tube 13) for sensing a process variable (e.g., viscosity). Therefore, to modify Cary et al. by employing a sensor for sensing a process variable would have been obvious to one of ordinary skill in the art at the time of the invention since Wenger et al. teaches a vibration meter having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Cary et al. and Wenger et al. since Cary states that his invention is applicable to a vibration meter and Wenger et al. is directed to using as vibration meter mounted within a vessel for sensing a process variable.

Re claim 26, Cary et al. discloses a vibration absorber (e.g., shock mounting 134 such as urethane rubber), which inherently has a resonant frequency, which is less than the resonant frequency of the electronic case (e.g. housing 102).

Re claim 30, Cary et al. discloses a vibration absorber (e.g., shock mounting 134 such as urethane rubber), which inherently has a resonant frequency, which is less than the resonant frequency of the electronic case (e.g. housing 102).

Re claim 34, Cary et al. discloses that the vibration absorber (e.g., shock mounting 134) is formed, for example, of urethane rubber. The urethane rubber inherently has a quality factor, which is lower than a quality factor, of the electronics case (e.g., housing 102) (Col. 7, lines 65).

Re claim 37, Cary et al. disclose a vibration absorber (e.g., shock mounting 134), which includes a plastic body (e.g., urethane rubber) affixed to the wall of the electronics case (e.g., housing 102).

Re claim 38, a depicted in fig. 11, Cary et al. discloses a vibration absorber (e.g., shock mounting 134) affixed to a wall of the electronics case (e.g., housing 102). While Cary et al. does not specifically disclose the vibration absorber affixed with adhesive, the method of affixing is a design choice clearly in the preview of one having ordinary skill in the art. Therefore to modify Cary et al. by employing on a vibration absorber affixed to the electronics case via adhesive would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches affixing an vibration absorber to the inner wall of an electronic case.

Re claim 39, as depicted in fig. 11, Cary et al. discloses an electronic case (e.g., housing 102) is screwed (122) onto a neck portion of the sensor (e.g., combination of pedestal (114), probe base (142), and probe tip portion (152)).

Re claim 40, Cary et al. discloses the electronics case (e.g., housing 102) rigidly coupled the sensor (e.g., ultrasonic flow meter 36) (See ref. '582, fig. 1).

Re claim 41, Cary et al. discloses the vibrations, to which the electronics case (e.g., housing 102) is subjected at least intermittently, are generated in the sensor (e.g., combination of pedestal (114), probe base (142), and probe tip portion (152)) (Col. 7, lines 58-65).

Re claim 42, Cary et al. discloses the vibrations, to which the electronics case (e.g., housing 102) is subjected at least intermittently, are transmitted via the sensor (e.g., combination of pedestal (114), probe base (142), and probe tip portion (152)) (Col. 7, lines 58-65).

Re claim 43, Cary et al. discloses a vibration meter. **While Cary et al does not specifically disclose that the sensor <u>mounted in a wall</u> of pipe, Cary et al. discloses an acceleration type vibration meter where a velocity vibration parameter is read out (Col. 7, lines 20-25), the device of Cary et al. will operate equally as well.** Wenger et al. discloses a vibration meter wherein sensors (17, 18) are velocity-measuring electrodynamic sensors, or displacement, or acceleration measuring electrodynamic sensors (Pg. 5, par. 123; Pg. 6 par. 124). As depicted in fig. 1, Wenger et al. discloses a sensor (17) mounted in the wall of a pipe (e.g., flow tube 13) for conveying a process medium (e.g., fluid). Therefore, to modify Cary et al. by employing a sensor mounted in a wall of a vessel would have been obvious to one of ordinary skill in the art at the time of the invention since Wenger et al. teaches a vibration meter having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Cary et al. and Wenger et al. since Cary states that his invention is applicable to a vibration meter and Wenger et al. is directed to using as vibration meter mounted within a vessel for conveying a process medium.

Re claim 45, Cary et al. discloses a vibration meter. **While Cary et al does not specifically disclose that the sensor the sensor is a viscometer, Cary et al. discloses an acceleration type vibration meter where a velocity vibration parameter is read out (Col. 7, lines 20-25), the device of Cary et al. will operate equally as well.** Wenger et al. discloses a vibration meter wherein sensors (17, 18) are velocity-measuring electrodynamic sensors, or displacement, or acceleration measuring electrodynamic sensors (Pg. 5, par. 123; Pg. 6 par. 124). As depicted in fig. 1, Wenger et al. discloses a

sensor (17) mounted in the wall of a vessel (e.g., flow tube 13) for conveying a process medium (e.g., fluid). The device of Wenger et al. measures viscosity of a fluid. Therefore, to modify Cary et al. by employing a sensor that is a viscometer would have been obvious to one of ordinary skill in the art at the time of the invention since Wenger et al. teaches a vibration meter having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Cary et al. and Wenger et al. since Cary states that his invention is applicable to a vibration meter and Wenger et al. is directed to using a vibration meter mounted within a vessel for conveying a process medium.

3. Claims 24 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cary et al. (4,827,771) in view of Miura et al. (5,596,139)

Re claims 24 and 44, Cary et al. disclose a vibration meter mounted against a surface of a vibratory structure. **Cary et al. does not disclose the sensor mounted in a wall of a tank.** Miura et al. discloses a vibration sensor (3) mounted in the wall of a tank/container (11). Therefore, to modify Cary et al. by employing a mounting the sensor in a wall of a tank would have been obvious to one of ordinary skill in the art at the time of the invention since Miura et al. teaches a liquid detecting device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Cary et al. and Miura et al. since Cary et al. states that his invention is applicable to vibration meter and Miura et al. uses a vibration meter/sensor mounted in the wall of a tank.

Response to Arguments

4. Applicant's arguments with respect to claims 11,12, 18, 21, 23, 25, 34-37, 40, 42, 43, 43, and 45 have been considered but are moot in view of the new ground(s) of rejection. It is the

examiners position that claims 11, 13, 16, 18, 20-23, 25, 26, 30, 34, 37-43, and 45 are not patentable over the newly applied art of Cary et al. (4,827,771) in view of Wenger et al. (2001/0039829). Claims 24 and 44 are not patentable over newly applied art of Cary et al. (4,827,771) in view of Miura et al. (5,596,139).

Allowable Subject Matter

5. Claims 12, 14, 15, 17, 19, 27-29, 31-33, 35, and 36 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Monday - Friday 7:30 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tamiko Bellamy
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May 23, 2006

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